

Sub E4
cont.

D5

(CF₃CH₂CH₂CF₃, HFC 356 ffa)

- | | | |
|----|--|------------------------------|
| F) | difluoromethoxy-
bis(difluoromethyl ether)
(HCF ₂ OCF ₂ OCF ₂ H);
methoxymethyl methyl ether | 59% by wt.
41% by wt. |
| G) | difluoromethoxy-
bis(difluoromethyl ether)
(HCF ₂ OCF ₂ OCF ₂ H);
n-hexane | 75% by wt.
25% by wt. |
| H) | 1-difluoromethoxy-1,1,2,2-tetra-
fluoroethyl difluoromethyl ether
(HCF ₂ OCF ₂ CF ₂ OCF ₂ H);
n-pentane | 61% by wt.
39% by wt. and |
| L) | 1-difluoromethoxy-1,1,2,2-tetra-
fluoroethyl difluoromethyl ether
(HCF ₂ OCF ₂ CF ₂ OCF ₂ H);
n-hexane | 74% by wt.
26% by wt. |

REMARKS

Claims 1-7, 10, 12-18, 22 and 23 were rejected. Claims 4-7 are canceled and claims 1, 3, 12, 18 and 22 amended. Support for the amendments can be found throughout the application, for instance at page 11 and in the claims as originally filed. No new matter is added. Claims 1-3, 10, 12-18, 22 and 23 are submitted for consideration. Applicants respectfully request reconsideration and withdrawal of all rejections.

Claim Rejections - 35 U.S.C. § 112, first paragraph

Claim 3 was rejected as not being enabled. The Office Action alleges that it is unclear what limitations are set forth by the subject matter of claim 3. Applicants point out that claim 3 has been amended so as to clarify those claim features set forth therein. Applicants urge that the foaming agent compositions of the claimed process are clearly enabled.

Claim Rejections - 35 U.S.C. § 112, second paragraph

Claims 4-7 were rejected as indefinite. Applicants respectfully point out that this rejection is moot in light of the cancellation of claims 4-7. Applicants reserve the right to file a divisional application directed to the subject matter of claims 4-7 as is appropriate.

Claims 12-16 and 18 were rejected as indefinite. The Office Action indicates that the claims are improperly dependent from two claims. Applicants point out that the dependency of the claims has been corrected by the amendment of claims 12 and 18 as indicated herein.

Claims 22 and 23 were rejected as indefinite. The Office Action indicates that the dependency of these claims is confusing. Applicants point out that claims 22 and 23 have been amended so as to clarify any confusion regarding their dependency.

Claims 1, 2, 4, 6, 7, 10, 12-18, 22 and 23 were also rejected as indefinite. The Office Action states that for VIII) of claims 1 and 7, the wrong structural formula is used in connection with the recited compound name. Applicants respectfully disagree. Applicants point out that composition VIII) of claim 1 includes the recitation of 1-difluoromethoxy 1,1,2,2-tetrafluoroethyl difluoromethyl ether ($\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{H}$) while composition VIII) of claim 7 includes the recitation of difluoromethoxy bis(difluoromethyl

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ether) ($\text{HCF}_2\text{OCF}_2\text{CF}_2\text{OCF}_2\text{H}$). Applicants respectfully submit that these structural formulas and compound names are used correctly. In the event Applicants have misunderstood this rejection, Applicants request clarification so as to enable an appropriate response.

Finally, claims 1-7, 10, 12-18, 22 and 23 were rejected as indefinite. The Office Action states that it is unclear what claim feature is conveyed by the phrase "as substitutes for CFC-11". Applicants respectfully submit that this features of the claims is clear and definite when read in view of the application as a whole. Applicants point out that the present invention is directed to processes for foaming polyurethane and thermoplastic polymers, the process comprising adding to compositions used to make solid polymers azeotropic or near azeotropic foaming agent compositions as "substitutes for CFC 11". The specification makes it clear that "substitutes for CFC 11" refers to the ability of the compositions to be used in place of CFC 11 in foaming processes. That is, the compositions may be used in process for the production of foam under those conditions suitable for the use of CFC 11. Example 2 starting at page 32 of the specification provides such an example. Example 2 discloses in particular the process for the production of foam wherein at room temperature the composition is admixed with polyol and water and then isocyanate is added. Such conditions are suitable for CFC 11 as well as the compositions as claimed for the production of foam. Applicant point out that the compositions may also be used in substantially the same quantities as CFC 11. In addition, the compositions may result in foam having similar physical characteristics as foam obtained through the use of CFC 11. Applicants respectfully submit that those of skill in the art would understand the claims to be clear and definite when read in light of the application as a whole.

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Claim Rejections - 35 U.S.C. § 102

Claims 1-3, 12, 13 and 23 were rejected under 35 U.S.C. 102(b) as anticipated by Klug et al. It is alleged in the Office Action that the claimed invention is anticipated by the disclosure by Klug et al. of azeotropic compositions and their use as blowing agents.

Applicants respectfully disagree. As discussed above, the present invention is directed to foaming processes wherein azeotropic or near azeotropic foaming agent compositions are used as "substitutes for CFC 11." In other words, the compositions are suitable for use in foaming processes wherein the conditions are such that foam production occurs with the use of CFC 11, as demonstrated in the specification (See Example 2).

Applicants submit that Klug et al. merely provides a general teaching, but does not teach or suggest any such composition as a substitute for CFC 11 in any process as claimed. Klug et al. does disclose azeotropic compositions made up of hydrofluoroether together with hydrocarbon. However, the disclosure of Klug et al. contains no teaching or suggestion regarding these compositions as substitutes of CFC 11. That is, Klug et al. does not teach or suggest that its compositions can be used as foaming agents under those same conditions in which CFC 11 produces foam, for instance when admixed at room temperature with polyol and water and then isocyanate (See Example 2). In the absence of such a teaching or suggestion, Applicants submit that those of skill in the art would have no motivation to use the compositions as substitutes for CFC 11 in foaming process as claimed.

Applicants again reference the Declaration submitted on December 5, 2000 as evidence that Klug et al. does not teach or suggest the claimed invention. The experiments presented in the Declaration show quite clearly that in Klug et al. there is no teaching at all to solve the technical problem of the present invention. In the conditions wherein CFC 11 forms a foam seven binary azeotropic compositions taken from Table 1, columns 10-11, reporting the azeotropic compositions of Klug et al., were found to be inoperative in the process of the invention. The results of Table 2 of the Declaration demonstrates that all of the azeotropic compositions of Klug et al. failed to provide foam having those characteristics of a foam obtained with CFC 11. Such results are in stark contrast to the results obtained under similar conditions with the claimed composition, comparative Ex. γ , and the composition containing CFC 11. The azeotropic compositions of Klug et al. simply failed to act as CFC 11 substitutes in any foaming process as claimed.


Klug et al. discloses that the azeotropic compositions exemplified therein are useful as refrigerating compositions. The reference, however, simply fails to teach or suggest such compositions as CFC 11 substitutes in a process as claimed herein.

In light of the discussion above, Applicants respectfully submit that the claimed invention is clearly patentable over the Klug et al. reference, and that this rejection should be withdrawn.

Applicants submit that this application is in condition for allowance.

In case this paper is not timely filed, the undersigned hereby petitions for an appropriate extension of time. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 01-2300.

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Claim 1 (Amended). A process for foaming polyurethane polymers and thermoplastic polymers, comprising: adding to compositions used to make solid polymers azeotropic or near azeotropic foaming agent compositions as substitutes for CFC 11, based on difluoromethoxy-bis(difluoromethyl ether) and/or 1-difluoromethoxy-1, 1, 2, 2-tetrafluoroethyl difluoromethyl ether, said foaming agent compositions selected from the group consisting of:

	composition % by weight
I) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); n-pentane	1-95 99-5
II) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); iso-pentane	1-99 99-1
III) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); dimethyl ketone (acetone)	1-60 99-40
IV) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); 1,1,1,3,3-pentafluorobutane (CF ₃ CH ₂ CF ₂ CH ₃ , HFC 365 mfc)	1-99 99-1
V) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); 1,1,1,4,4,4-hexafluorobutane (CF ₃ CH ₂ CH ₂ CF ₃ , HFC 356 ffa)	1-40 99-60
VI) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H);	1-96

	methoxymethyl methylether	99-14
VII)	difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); n-hexane	30-99 70-1
VIII)	1-difluoromethoxy 1,1,2,2-tetrafluoroethyl difluoromethyl ether (HCF ₂ OCF ₂ OCF ₂ H); n-pentane	1-93 99-7
IX)	1-difluoromethoxy 1,1,2,2-tetrafluoroethyl difluoromethyl ether (HCF ₂ OCF ₂ OCF ₂ H); dimethyl ketone (acetone)	30-99 70-1
X)	1-difluoromethoxy 1,1,2,2-tetrafluoroethyl difluoromethyl ether (HCF ₂ OCF ₂ OCF ₂ H); n-hexane	15-99 85-1
XI)	1-difluoromethoxy 1,1,2,2-tetrafluoroethyl difluoromethyl ether (HCF ₂ OCF ₂ OCF ₂ H); ethyl alcohol	5-99 95-1
XII)	difluoromethoxy-bis (difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); 1,1,1,3,3-pentafluorobutane (CF ₃ CH ₂ CF ₂ CH ₃ , HFC 365 mfc) a hydrocarbon selected from n-pentane or isopentane	1-64 98-1 1-35 and
XIII)	difluoromethoxy-bis (difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); 1,1,1,4,4,4-hexafluorobutane (CF ₃ CH ₂ CH ₂ CF ₃ , HFC 356 ffa) a hydrocarbon selected from n-pentane or isopentane	1-22 98-43 1-35

wherein

- (1) in the foaming agent compositions II, III, IV, V and VI, up to 40% by weight of the difluoromethoxy-bis(difluoromethyl ether) is optionally substituted with 1-difluoromethoxy-1,1,2,2-tetrafluoroethyldifluoromethyl ether;
- (2) in the foaming agent compositions IX and X, up to 40% by weight of 1-difluoromethoxy-1,1,2,2-tetrafluoroethyl difluoromethyl ether is optionally substituted by difluoromethoxy-bis(difluoromethyl) ether;
- (3) in the foaming agent compositions I and VII, up to 50% by weight of difluoromethoxy-bis(difluoromethyl ether) is optionally substituted by 1-difluoromethoxy-1,1,2,2-tetrafluoroethyldifluoromethyl ether;
- (4) in the foaming agent compositions VIII and X, up to 50% by weight of 1-difluoromethoxy-1,1,2,2-tetrafluoroethyldifluoromethyl ether is optionally substituted with difluoromethoxy-bis(difluoromethyl) ether.

Claim 3 (Amended). The process according to claim 1, wherein the foaming agent compositions [have an absolute minimum or maximum of the boiling temperature at the pressure of 1.013 bar with respect to the pure products and] are selected from the group consisting of:

- | | | |
|----|--|------------|
| A) | difluoromethoxy-bis
(difluoromethyl ether)
($\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{H}$); | 62% by wt. |
| | n-pentane | 38% by wt. |
| B) | difluoromethoxy-
bis(difluoromethyl ether)
($\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{H}$); | 63% by wt. |
| | iso-pentane | 36% by wt. |
| C) | difluoromethoxy- | |

	bis(difluoromethyl ether) ($\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{H}$); dimethyl ketone (acetone)	42% by wt. 58% by wt.
D)	difluoromethoxy- bis(difluoromethyl ether) ($\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{H}$); 1,1,1,3,3-pentafluorobutane ($\text{CF}_3\text{CH}_2\text{CF}_2\text{CH}_3$, HFC 356 mfc)	60% by wt. 40% by wt.
E)	difluoromethoxy- bis(difluoromethyl ether) ($\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{H}$); 1,1,1,4,4,4-hexafluorobutane ($\text{CF}_3\text{CH}_2\text{CH}_2\text{CF}_3$, HFC 356 ffa)	20% by wt. 80% by wt.
F)	difluoromethoxy- bis(difluoromethyl ether) ($\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{H}$); methoxymethyl methyl ether	59% by wt. 41% by wt.
G)	difluoromethoxy- bis(difluoromethyl ether) ($\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{H}$); n-hexane	75% by wt. 25% by wt.
H)	1-difluoromethoxy-1,1,2,2-tetra- fluoroethyl difluoromethyl ether ($\text{HCF}_2\text{OCF}_2\text{CF}_2\text{OCF}_2\text{H}$); n-pentane	61% by wt. 39% by wt.
I)	1-difluoromethoxy-1,1,2,2-tetra- fluoroethyl difluoromethyl ether ($\text{HCF}_2\text{OCF}_2\text{CF}_2\text{OCF}_2\text{H}$); dimethyl ketone (acetone)	79% by wt. 21% by wt.
L)	1-difluoromethoxy-1,1,2,2-tetra- fluoroethyl difluoromethyl ether ($\text{HCF}_2\text{OCF}_2\text{CF}_2\text{OCF}_2\text{H}$); n-hexane	74% by wt. 26% by wt. and
M)	1-difluoromethoxy-1,1,2,2-tetra- fluoroethyl difluoromethyl ether ($\text{HCF}_2\text{OCF}_2\text{CF}_2\text{OCF}_2\text{H}$); ethyl alcohol	95% by wt. 5% by wt.

Claim 12 (Amended). The process according to claim 1, wherein the compositions are selected from the group consisting of:

	composition % by weight
I) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); n-pentane	1-95 99-5
II) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); iso-pentane	1-99 99-1
IV) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); 1,1,1,3,3-pentafluorobutane (CF ₃ CH ₂ CF ₂ CH ₃ , HFC 365 mfc)	1-99 99-1
V) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); 1,1,1,4,4,4-hexafluorobutane (CF ₃ CH ₂ CH ₂ CF ₃ , HFC 356 ffa)	1-40 99-60
VI) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); methoxymethyl methylether	1-96 99-14
VII) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); n-hexane	30-99 70-1
VIII) 1-difluoromethoxy 1,1,2,2-tetrafluoroethyl difluoromethyl ether (HCF ₂ OCF ₂ OCF ₂ H); n-pentane	1-93 99-7 and
X) 1-difluoromethoxy 1,1,2,2-tetrafluoroethyl	

difluoromethyl ether
($\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{H}$);
n-hexane

15-99

85-1

[and A, B, D, E, F, G, H and L of claim 3.]

and

- | | |
|---|--|
| A) <u>difluoromethoxy-bis</u>
<u>(difluoromethyl ether)</u>
<u>($\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{H}$);</u>
<u>n-pentane</u> | <u>62% by wt.</u>
<u>38% by wt.</u> |
| B) <u>difluoromethoxy-</u>
<u>bis(difluoromethyl ether)</u>
<u>($\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{H}$);</u>
<u>iso-pentane</u> | <u>63% by wt.</u>
<u>36% by wt.</u> |
| D) <u>difluoromethoxy-</u>
<u>bis(difluoromethyl ether)</u>
<u>($\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{H}$);</u>
<u>1,1,1,3,3-pentafluorobutane</u>
<u>($\text{CF}_3\text{CH}_2\text{CF}_2\text{CH}_3$, HFC 356 mfc)</u> | <u>60% by wt.</u>
<u>40% by wt.</u> |
| E) <u>difluoromethoxy-</u>
<u>bis(difluoromethyl ether)</u>
<u>($\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{H}$);</u>
<u>1,1,1,4,4,4-hexafluorobutane</u>
<u>($\text{CF}_3\text{CH}_2\text{CH}_2\text{CF}_3$, HFC 356 ffa)</u> | <u>20% by wt.</u>
<u>80% by wt.</u> |
| F) <u>difluoromethoxy-</u>
<u>bis(difluoromethyl ether)</u>
<u>($\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{H}$);</u>
<u>methoxymethyl methyl ether</u> | <u>59% by wt.</u>
<u>41% by wt.</u> |
| G) <u>difluoromethoxy-</u>
<u>bis(difluoromethyl ether)</u>
<u>($\text{HCF}_2\text{OCF}_2\text{OCF}_2\text{H}$);</u>
<u>n-hexane</u> | <u>75% by wt.</u>
<u>25% by wt.</u> |
| H) <u>1-difluoromethoxy-1,1,2,2-tetra-</u>
<u>fluoroethyl difluoromethyl ether</u>
<u>($\text{HCF}_2\text{OCF}_2\text{CF}_2\text{OCF}_2\text{H}$);</u>
<u>n-pentane</u> | <u>61% by wt.</u>
<u>39% by wt. and</u> |
| L) <u>1-difluoromethoxy-1,1,2,2-tetra-</u> | |

fluoroethyl difluoromethyl ether
(HCF₂OCF₂CF₂OCF₂H);
n-hexane

74% by wt.

26% by wt.

Claim 18 (Amended). The process according to claim 1, wherein the compositions are selected from the group consisting of:

	composition % by weight
I) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); n-pentane	1-95 99-5
II) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); iso-pentane	1-99 99-1
III) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); dimethyl ketone (acetone)	1-60 99-40
VII) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); n-hexane	30-99 70-1
VIII) 1-difluoromethoxy 1,1,2,2-tetrafluoroethyl difluoromethyl ether (HCF ₂ OCF ₂ OCF ₂ H); n-pentane	1-93 99-7
IX) 1-difluoromethoxy 1,1,2,2-tetrafluoroethyl difluoromethyl ether (HCF ₂ OCF ₂ OCF ₂ H); dimethyl ketone (acetone)	30-99 70-1
X) 1-difluoromethoxy 1,1,2,2-tetrafluoroethyl difluoromethyl ether	15-99

	(HCF ₂ OCF ₂ OCF ₂ H); n-hexane	85-1
XI)	1-difluoromethoxy 1,1,2,2-tetrafluoroethyl difluoromethyl ether (HCF ₂ OCF ₂ OCF ₂ H); ethyl alcohol	5-99 95-1
XII)	difluoromethoxy-bis (difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); 1,1,1,3,3-pentafluorobutane (CF ₃ CH ₂ CF ₂ CH ₃ , HFC 365 mfc) a hydrocarbon selected from n-pentane or isopentane	1-64 98-1 1-35 and
XIII)	difluoromethoxy-bis (difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); 1,1,1,4,4,4-hexafluorobutane (CF ₃ CH ₂ CH ₂ CF ₃ , HFC 356 ffa) a hydrocarbon selected from n-pentane or isopentane	1-22 98-43

and [A, B, C, G, H, I, L and M of claim 3.]

A)	<u>difluoromethoxy-bis</u> <u>(difluoromethyl ether)</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>n-pentane</u>	<u>62% by wt.</u> <u>38% by wt.</u>
B)	<u>difluoromethoxy-</u> <u>bis(difluoromethyl ether)</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>iso-pentane</u>	<u>63% by wt.</u> <u>36% by wt.</u>
C)	<u>difluoromethoxy-</u> <u>bis(difluoromethyl ether)</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>dimethyl ketone (acetone)</u>	<u>42% by wt.</u> <u>58% by wt.</u>
G)	<u>difluoromethoxy-</u> <u>bis(difluoromethyl ether)</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>n-hexane</u>	<u>75% by wt.</u> <u>25% by wt.</u>

H)	<u>1-difluoromethoxy-1,1,2,2-tetra- fluoroethyl difluoromethyl ether (HCF₂OCF₂CF₂OCF₂H); n-pentane</u>	<u>61% by wt.</u> <u>39% by wt.</u>
I)	<u>1-difluoromethoxy-1,1,2,2-tetra- fluoroethyl difluoromethyl ether (HCF₂OCF₂CF₂OCF₂H); dimethyl ketone (acetone)</u>	<u>79% by wt.</u> <u>21% by wt.</u>
L)	<u>1-difluoromethoxy-1,1,2,2-tetra- fluoroethyl difluoromethyl ether (HCF₂OCF₂CF₂OCF₂H); n-hexane</u>	<u>74% by wt.</u> <u>26% by wt. and</u>
M)	<u>1-difluoromethoxy-1,1,2,2-tetra- fluoroethyl difluoromethyl ether (HCF₂OCF₂CF₂OCF₂H); ethyl alcohol</u>	<u>95% by wt.</u> <u>5% by wt.</u>

Claim 22 (Amended). Polyurethane compositions comprising the foaming compositions selected from the foaming compositions:

[I, II, III, VII, VIII, IX, X, XI, XII, and XIII of claim 1, and A, B, C, G, H, I, L and M of claim 3.]

	<u>composition % by weight</u>
I) <u>difluoromethoxy bis(difluoromethyl ether) (HCF₂OCF₂OCF₂H); n-pentane</u>	<u>1-95</u> <u>99-5</u>
II) <u>difluoromethoxy bis(difluoromethyl ether) (HCF₂OCF₂OCF₂H); iso-pentane</u>	<u>1-99</u> <u>99-1</u>
III) <u>difluoromethoxy bis(difluoromethyl ether) (HCF₂OCF₂OCF₂H); dimethyl ketone (acetone)</u>	<u>1-60</u> <u>99-40</u>

VII)	<u>difluoromethoxy</u> <u>bis(difluoromethyl ether)</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>n-hexane</u>	<u>30-99</u> <u>70-1</u>
VIII)	<u>1-difluoromethoxy</u> <u>1,1,2,2-tetrafluoroethyl</u> <u>difluoromethyl ether</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>n-pentane</u>	 <u>1-93</u> <u>99-7</u>
IX)	<u>1-difluoromethoxy</u> <u>1,1,2,2-tetrafluoroethyl</u> <u>difluoromethyl ether</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>dimethyl ketone (acetone)</u>	 <u>30-99</u> <u>70-1</u>
X)	<u>1-difluoromethoxy</u> <u>1,1,2,2-tetrafluoroethyl</u> <u>difluoromethyl ether</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>n-hexane</u>	 <u>15-99</u> <u>85-1</u>
XI)	<u>1-difluoromethoxy</u> <u>1,1,2,2-tetrafluoroethyl</u> <u>difluoromethyl ether</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>ethyl alcohol</u>	 <u>5-99</u> <u>95-1</u>
XII)	<u>difluoromethoxy-bis</u> <u>(difluoromethyl ether)</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>1,1,1,3,3-pentafluorobutane</u> <u>(CF₃CH₂CF₂CH₃, HFC 365 mfc)</u> <u>a hydrocarbon selected from</u> <u>n-pentane or isopentane</u>	 <u>1-64</u> <u>98-1</u> <u>1-35 and</u>
XIII)	<u>difluoromethoxy-bis</u> <u>(difluoromethyl ether)</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>1,1,1,4,4,4-hexafluorobutane</u> <u>(CF₃CH₂CH₂CF₃, HFC 356 ffa)</u> <u>a hydrocarbon selected from</u> <u>n-pentane or isopentane</u>	 <u>1-22</u> <u>98-43</u> <u>1-35</u>

and

A)	<u>difluoromethoxy-bis</u> <u>(difluoromethyl ether)</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>n-pentane</u>	<u>62% by wt.</u> <u>38% by wt.</u>
B)	<u>difluoromethoxy-</u> <u>bis(difluoromethyl ether)</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>iso-pentane</u>	<u>63% by wt.</u> <u>36% by wt.</u>
C)	<u>difluoromethoxy-</u> <u>bis(difluoromethyl ether)</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>dimethyl ketone (acetone)</u>	<u>42% by wt.</u> <u>58% by wt.</u>
G)	<u>difluoromethoxy-</u> <u>bis(difluoromethyl ether)</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>n-hexane</u>	<u>75% by wt.</u> <u>25% by wt.</u>
H)	<u>1-difluoromethoxy-1,1,2,2-tetra-</u> <u>fluoroethyl difluoromethyl ether</u> <u>(HCF₂OCF₂CF₂OCF₂H);</u> <u>n-pentane</u>	<u>61% by wt.</u> <u>39% by wt.</u>
I)	<u>1-difluoromethoxy-1,1,2,2-tetra-</u> <u>fluoroethyl difluoromethyl ether</u> <u>(HCF₂OCF₂CF₂OCF₂H);</u> <u>dimethyl ketone (acetone)</u>	<u>79% by wt.</u> <u>21% by wt.</u>
L)	<u>1-difluoromethoxy-1,1,2,2-tetra-</u> <u>fluoroethyl difluoromethyl ether</u> <u>(HCF₂OCF₂CF₂OCF₂H);</u> <u>n-hexane</u>	<u>74% by wt.</u> <u>26% by wt. and</u>
M)	<u>1-difluoromethoxy-1,1,2,2-tetra-</u> <u>fluoroethyl difluoromethyl ether</u> <u>(HCF₂OCF₂CF₂OCF₂H);</u> <u>ethyl alcohol</u>	<u>95% by wt.</u> <u>5% by wt.</u>

Claim 23 (Amended). Thermoplastic polymer compositions containing foaming agents,
said foaming agents selected from the group consisting of:

	composition % by weight
I) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); n-pentane	1-95 99-5
II) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); iso-pentane	1-99 99-1
IV) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); 1,1,1,3,3-pentafluorobutane (CF ₃ CH ₂ CF ₂ CH ₃ , HFC 365 mfc)	1-99 99-1
V) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); 1,1,1,4,4,4-hexafluorobutane (CF ₃ CH ₂ CH ₂ CF ₃ , HFC 356 ffa)	1-40 99-60
VI) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); methoxymethyl methylether	1-96 99-14
VII) difluoromethoxy bis(difluoromethyl ether) (HCF ₂ OCF ₂ OCF ₂ H); n-hexane	30-99 70-1 and
VIII) 1-difluoromethoxy 1,1,2,2-tetrafluoroethyl difluoromethyl ether (HCF ₂ OCF ₂ OCF ₂ H); n-pentane	1-93 99-7

and [A, B, D, E, F, G, H and L of claim 3.]

A)	<u>difluoromethoxy-bis</u> <u>(difluoromethyl ether)</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>n-pentane</u>	<u>62% by wt.</u> <u>38% by wt.</u>
B)	<u>difluoromethoxy-</u> <u>bis(difluoromethyl ether)</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>iso-pentane</u>	<u>63% by wt.</u> <u>36% by wt.</u>
D)	<u>difluoromethoxy-</u> <u>bis(difluoromethyl ether)</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>1,1,1,3,3-pentafluorobutane</u> <u>(CF₃CH₂CF₂CH₃, HFC 356 mfc)</u>	<u>60% by wt.</u> <u>40% by wt.</u>
E)	<u>difluoromethoxy-</u> <u>bis(difluoromethyl ether)</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>1,1,1,4,4,4-hexafluorobutane</u> <u>(CF₃CH₂CH₂CF₃, HFC 356 ffa)</u>	<u>20% by wt.</u> <u>80% by wt.</u>
F)	<u>difluoromethoxy-</u> <u>bis(difluoromethyl ether)</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>methoxymethyl methyl ether</u>	<u>59% by wt.</u> <u>41% by wt.</u>
G)	<u>difluoromethoxy-</u> <u>bis(difluoromethyl ether)</u> <u>(HCF₂OCF₂OCF₂H);</u> <u>n-hexane</u>	<u>75% by wt.</u> <u>25% by wt.</u>
H)	<u>1-difluoromethoxy-1,1,2,2-tetra-</u> <u>fluoroethyl difluoromethyl ether</u> <u>(HCF₂OCF₂CF₂OCF₂H);</u> <u>n-pentane</u>	<u>61% by wt.</u> <u>39% by wt. and</u>
L)	<u>1-difluoromethoxy-1,1,2,2-tetra-</u> <u>fluoroethyl difluoromethyl ether</u> <u>(HCF₂OCF₂CF₂OCF₂H);</u> <u>n-hexane</u>	<u>74% by wt.</u> <u>26% by wt.</u>